

IN THE SPECIFICATION:

Replace the abstract (i.e., page 8, lines 1-8) as follows:

-- To efficiently use space capacity and to provide accurate motion vectors for P-
pictures, a two-pass search in a P-coding mode of an MPEG encoder is run so that the
second pass refines the precision of motion vectors found in the first pass. Within a
frame encoding period, the first pass coincides with the time interval used by a known
MPEG video encoder in encoding B-pictures to search forward motion vectors with
respect to a prior image, and, within the frame encoding period, the second pass coincides
with searching backward motion vectors with respect to a subsequent image.
~~conventional MPEG video encoder searches forward motion vectors with respect to a~~
~~previous image and backward motion vectors with respect to a subsequent image in order~~
~~to provide a motion-compensated prediction image for encoding B-pictures. This~~
~~requires 2N accesses to the memory in which said images are stored. Searching the~~
~~motion vectors for P pictures requires N memory accesses. The invention uses the space~~
~~capacity by running a two-pass vector search in the P-coding mode. In the second pass,~~
~~the precision of the motion vectors found in the first pass is further refined. This~~
~~provides accurate motion vectors for P pictures.--~~